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ABSTRACT

A dynamic story is a story in which the reader must make choices about the direction the story will take at pivotal points in the plot. Because of their interactive nature, dynamic stories may be used to effectively teach English as a Second Language (ESL). Existing dynamic stories, however, are usually inadequate for this purpose. In book form, they involve too much page flipping, while those stories available on computer software are either aimed at a very young audience, or use a lexicon that non-native English speakers would neither know nor need to know. A better way to employ these stories in the ESL classroom is to have students create the stories. By writing such stories, students improve their lexical and grammar skills, and learn about the process of writing while gaining confidence in their English abilities. A method is described here for the classroom creation of computer-based dynamic stories using commercially available, user-friendly software. One example of this method is detailed, and several story "openings" are appended. (JL)

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A COLLABORATIVE COMPUTER-ASSISTED READING AND WRITING PROJECT: DYNAMIC STORIES

In a dynamic story, the reader makes choices about the direction that the story will take at pivotal points in the plot. If Lewis Carroll's Alice in Wonderland were a dynamic story, it might look like this:

> ...Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waist-coat pocket, or a watch to take out of it, and , burning with curiosity, she ran across the field after it, and was just in time to see it pop down a large rabbit-hole under the hedge.
>
> What should Alice do?
>
> Turn to page 25 if she should follow the rabbit down the rabbit-hole.
>
> Turn to page 36 if she should return to her sister near the river bank.

Dynamic stories in book form do exist. A 10-year-old Italian acquaintance said they were "all the rage among his friends." I was impressed by his excitement about reading, by the fact that reading these stories was a respected peer group "sport" for him, by the amount of reading he did, rereading each story many times to check different alternatives.

The concept of dynamic stories fits in well with reading pedagogy. It is generally accepted that a reading program should use material that is meaningful and motivating (see Coady, (1979) and Goodman and Goodman, (1981) for example) and that a reading program should encourage students to be "active"

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readers, interacting with the text, sampling and hypothesizing (see, for example, Clarke and Silberstein, (1977)) Clearly, dynamic stories, in their ability to "grab" young readers, are meaningful; equally clear is their ability to encourage readers to be active by forcing the readers, themselves, to make choices.

However, the dynamic story in book form is a strange concept indeed. Readers are constantly flipping through pages as their choices lead them on different paths throughout the book. In addition, readers are sidetracked because they have visual access at all times to all the branches, almost like having all the clues to a mystery within a room but being told not to pay attention to them.

The dynamic story on computers is a much more natural way to approach this type of reading. The computer's branching abilities allow different screens to be shown instantaneously depending on the reader's choice. The reader is only aware of what he or she has read before or what is on the screen, not the possibly hundreds of other extraneous branches he or she might have chosen or will choose. Dynamic stories on computers retain the advantages of the dynamic text in book form--the meaningful nature of the readings and the requirement that the readers be active participants in the reading process--but overcome the major disadvantage of the printed dynamic story-the general awkwardness.

In addition, the dynamic story on computers takes advantage of the public nature of the computer screen. Language learning takes place in the interaction around the computer screen as well as with the information on the computer screen. When students read a dynamic story on a computer and discuss with each other how the story should proceed, language development comes not only from the reading itself but also from the discussion about the reading and the decisions that need to be made.

Numerous computerized dynamic stories have been commercially made. The idea is intact; however, there is clearly a problem for non-native English speakers. Often these commercially produced dynamic stories are written for native English speaking children or adolescents and center around fantasy themes or science fiction themes and are replete with wizards, dragons and visitors from the fourth dimension. The language includes words that one would hardly expect a non-native English speaker to know or need to know--- "dungeon," "cauldron," to name a couple of more mundane ones. Those which use a simpler vocabulary are often written for young children and the content may appear condescending to a non-native English speaking adult or adolescent.

An ideal pedagogical situation would be one in which students created their own dynamic stories and used their own stories and those of their peers as a source of future reading. This is in line with the Language Experience Approach to teaching reading and writing where the students' own words become the source of reading data. (See Dixon and Nessel, 1983). The student-developed material, once edited, would be ideal material for language acquisition, in line with Krashen's (1982) claim that language acquisition occurs when there is "comprehensible input," exposure to spoken or written language that the learner wants to understand and that is understood, and that is at a stage slightly more advanced than the learners present stage. Clearly, the language of a self-generated dynamic story would be comprehensible because it would be the student's own ideas; equally clear is the idea that the work would be at a slightly higher level than the student's initial levels because it would be edited in the final product. Finally, and of definite importance, is the idea that it would be inherently interesting and relevant to the language learner because, the student, himself or herself, created it. Regarding writing development,

Krashen (1985) has hypothesized that reading for genuine interest with a focus on meaning provides language learners with comprehensible input similar to comprehensible oral input. He proposes (1984) that reading contributes to written competence just as listening contributes to speech competence.

Another advantage of using student-generated dynamic stories is their potential for empowering students as writers. Although the word "empowerment" may be overused, the idea is a central one. As Mittan (1989: 207) says, "it doesn't mean giving students power that they don't already possess... instead, it means highlighting and nurturing the strengths students already have." One of the strengths of many ESL students, which is commonly untapped in academic ESL classes, is their imagination and creativity. In an academic writing class where students' grammatical and rhetorical weaknesses are often all too apparent, the opportunity to highlight students' strengths is very appealing. Additional empowerment comes from the breakdown of the typical teacher-student interaction in which the teacher initiates the topic, the students respond to the topic in writing, the teacher corrects the writing. When writing the dynamic story, the student takes on a new role of expert, in topic selection and content at least. Johnson (1989:44) suggests that "mounting evidence from research in both oral and written language development suggests that a sense of control in using language contributes to richness in language use and better writing" and that "a sense of control over topics, subject matter, and meanings to be conveyed helps promote writing development (p. 45)".

Finally, having students generate their own dynamic stories using word processing software is inherently advantageous. Various studies have suggested benefits of word processing in developing writing skills (see Hawisher, (1989) for a review of this research). Studies have suggested that word processing creates more

positive attitudes toward writing, that students exhibit finished products with fewer mechanical errors than when writing with pen and paper, that students write longer pieces when using word processors. Ethnographic studies of the social organization of classrooms using word processors have remarked on the "collaborative social organization in which considerable talk related to writing took place," often focusing on content and style. These studies also mention the advantages accrued by making writing a less isolating activity due to the public nature of the computer screen.

A student-generated dynamic story writing project was implemented in a low-advanced writing class at the University of California, Irvine. Typically, our writing curriculum has been based upon a process approach with students using word processors to write essays with multiple revisions and with classroom time being used to brainstorm, give and receive peer comments, and revise. Our course materials include a lot of reading because of our program's belief that appropriate input in the form of reading is necessary to gain intuitions about vocabulary, grammar, rhetoric. Also, in these classes, we have typically encouraged a wide variety of writing genres: journals, letters, essays, etc. An overriding concern has been that students feel involved in the ideas that they are expressing in their writings. The student-generated dynamic story writing project fit in well with our program's philosophy of language acquisition and writing pedagogy by providing numerous opportunities for brainstorming, writing, revising, editing, collaborating, giving and receiving feedback, reading and it provided an avenue for motivating students with a "playful" activity.

The project was implemented in a computer lab, using IBM-compatible computers and a dynamic story authoring system, Roger Kenner's (1989) "Adventure

Game and Interactive Fiction Generator."

STEP 1: Demonstrate sample of interactive fiction.

The goal of this demonstration was to help students understand the concept of dynamic stories and branching, and to get students excited about the potential of creating their own dynamic story.

STEP 2: Assign task of writing the opening scene ending with 2 or 3 choices.

Further directions, conditions, and models were avoided because students, when given room to explore, tend to be more creative. Having students feel in control of the topic, content, and style was important.

STEP 3: Give students feedback on openings and ask for revised versions.

STEP 4: Distribute copies of all the opening scenes to students. Group the openings into topical categories (e.g. mysteries, sci-fi, real- life). Have students vote on the best in each category and finally, the one(s) that the class will work with.

During Step 3, students turned in their openings for feedback (which was generally grammar-oriented but occasionally dealt with content and organization) and revised their openings. During Step 4, the revised and edited work was collected, categorized according to genre, and distributed to students (with names removed). Sample openings in the Appendix demonstrate some of the diversity of responses.

Students were first asked to vote on the best opening in each category and then

on the category, itself. Students were encouraged to ask themselves the following questions prior to voting: are the branches equally interesting? is the story plot clear? can I imagine a story that would take many turns? would this story be fun for me to work on? would this story be fun for others to work on? can this story realistically be written in the amount of time available or is it too complex?

This evaluating and voting process took place many times throughout the project as students discussed alternatives for a particular branch and chose one among many choices to use in the final product. Peer review of this sort provided a number of benefits. It provided a clear audience for the writer and "harness[ed] the powerful educative force of peer influence" that according to Bruffee (1984:638), "has been--and largely still is--ignored and hence wasted by traditional forms of education." In addition, peer review created a community of writers, resulting in student recognition of him or herself as a member of that community. Finally, the process of selecting the branches for inclusion in the final product required students to read a great deal of peer-generated and edited material, ideal comprehensible input.

Once the opening, Level 1, was agreed upon, the students were ready to begin work on Level 2. (The sample division of tasks is given for a class of 18 students.)

STEP 5: Divide students into groups to work on LEVEL 2 of the dynamic story:

e.g. LEVEL 1 (decided on by 18 students)

LEVEL 2 A	LEVEL 2 B
(3 groups of 3 students)	(3 groups of 3 students)

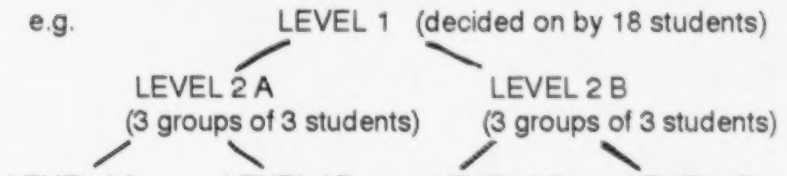
STEP 6: Once again, collect student work, give feedback, and ask for revision. Once revised, have all students working on the same branch decide among themselves which of the three versions they want to use in the story.

By having students work collaboratively in groups of three to write their branch, they could share ideas about content, grammar, and organization. Because each branch had three groups of three students working on it, students would later have to read others' work, evaluate others' work, and use language to argue for the inclusion in the final product of their favorite among the three possibilities. (Research (see for example, Haste, Burke, and Woodward, (1984) as reported in Freeman and Freeman, (1989)) suggests that all the skills--reading, writing, speaking, and listening--feed into a common "data pool" from which learners draw data for future reading, writing, speaking, or listening encounters and thus, all vehicles of language use can support the development of literacy.)

Steps 7 through 12 followed the same basic format; however, at each new level, the number of people involved with each branch was halved. For example, in Step 7, where students were working on the third level, instead of having two branches to work on, there were four branches that needed to be created. Still the basic procedure was retained: students worked in groups to write their branch and made a decision about which branch to ultimately select as the component of the final dynamic story. It was only at the fifth level (Step 11), where there were sixteen different possible endings, that students were working individually. This final individual writing stage was important in that it guaranteed that, at least somewhere in the final product, each student would find some of his or her own writing. Students were instructed to end this branch on a final note.

STEP 7: Work on LEVEL 3.

e.g.

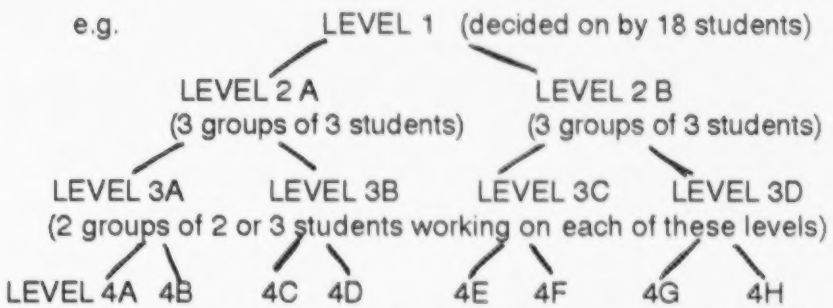


(2 groups of 2 or 3 students working on each of these levels)
Each group of 2 or 3 students will write one version for that particular branch.

STEP 8: Once again, collect student work, give feedback, and ask for revision. Once revised, have all students working on the same branch decide among themselves which of the two versions they want to use in the story.

STEP 9: Work on LEVEL 4.

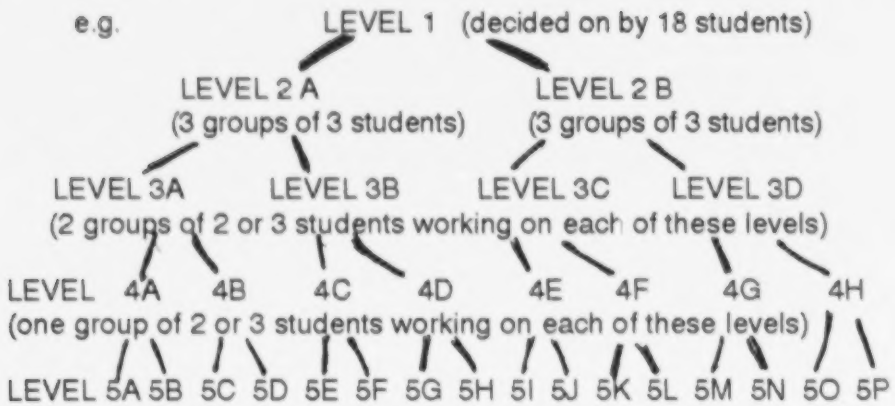
e.g.



(one group of 2 or 3 students working on each of these levels)
Each group of 2 or 3 students will write one version for that particular branch.

STEP 10: Once again, collect student work, give feedback, and ask for revision.

STEP 11: Work on the last LEVEL.


e.g.
LEVEL 1 (decided on by 18 students)
LEVEL 2 A
(3 groups of 3 students)
LEVEL 2 B
(3 groups of 3 students)
LEVEL 3A
LEVEL 3B
LEVEL 3C
LEVEL 3D
(2 groups of 2 or 3 students working on each of these levels)
LEVEL 4A 4B 4C 4D 4E 4F 4G 4H
(one group of 2 or 3 students working on each of these levels)
LEVEL 5A 5B 5C 5D 5E 5F 5G 5H 5I 5J 5K 5L 5M 5N 5O 5P

STEP 12: Collect individual work, give feedback, and ask for revision.

STEP 13: Program into Kenner's authoring system.

Programming the material into Kenner's authoring system is quite simple, requiring no knowledge of computer languages. However, the process of inputting 35 branches was very time-consuming. A more efficient process would be to collect students' branches on disks and convert them to non-document mode so that they can be copied directly into Kenner's program rather than typed anew.

STEP 14: Create "book" in "library." Have students read and explore.

Writing pedagogists suggest that students write for an audience. A problem in the typical classroom is that the audience is only the teacher. However, when students know that their "book" will be read and reread by future students, they have

a clearer sense of a wider audience, which includes the teacher but which is clearly for other students as well. Also, because they know that peers will be reading their "book," and because, in many ways, the opinion of one's peers is more compelling than the opinion of one's teacher, greater thought often goes into the creation of something which will be read by peers for many semesters to come. Finally, students tend to take pride in the fact that something that they have worked on has an effect which lasts beyond their course--it has longevity-- an aspect and a thrill of writing that writing teachers may aim to convey but often never quite transmit when class material, in truth, never does extend beyond the classroom walls.

STEP 15: Follow-up activities

There are numerous opportunities for using these dynamic stories creatively once they are finished. For one thing, the dynamic story can always be expanded by adding new branches. A class may decide to elaborate on a previous story rather than write its own. Another activity that can exploit the potential of the dynamic story could include assigning students the task of finding their "favorite" story path and telling about it or printing it out or summarizing it. In the process of doing this, students will obviously be reading and rereading the story, taking different branches many times. This "recycling" of vocabulary and grammar will be helpful for gaining language intuitions yet will not be tedious repetition because some new "path" can always be selected. The task of retelling the story or summarizing it gives the student practice in paraphrasing and using the vocabulary and grammar in different settings. In the same vein, games can be played such as "find out how to get to this

ending." In the process of trying to "win", students once again will be reading for meaning and often rereading certain sections.

Students' reactions to this project were overwhelmingly positive. The great majority said that the project was enjoyable and helped them be more creative. This was not surprising. What was surprising to me was that the great majority also said that writing these dynamic stories improved their grammar more than writing an essay with multiple revisions would have done and that they had done more writing during this project than they would have done if they had written an essay with multiple revisions. Since this was not a controlled study, I cannot argue for the validity for their claims of improved grammar or greater amounts of writing. I would argue, however, that there is a benefit in the simple fact that students <u>believed</u> that this was the case. The project was clearly enjoyable and empowered them, allowing them to perceive themselves as competent writers.

In conclusion, Kitagawa (1989:70) says that "students write and learn best in the accomplishment of their own agenda. Since the agenda of a writer includes such diverse purposes as self-discovery, self-expression, recording, reporting, entertaining, and persuading, the vital need is for a context in which to carry out these intentions." A student created CALL dynamic story can provide one such context.

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APPENDIX Sample Student-Generated Openings

"Real-Life Adventures"

Tuan, a typical Vietnamese teenager, came to America and found out that the transition was not as easy as he had once thought.

After his country fell into the hands of the communists, Tuan left Vietnam, hoping that some day he would return to bring freedom to his countrymen. This patriotism came from the teachings of his old teachers and, of course, from his father, a former general in the army. When he was younger, Tuan had read about many of his country's historic heroes. He had learned that for more than 4000 years, the Vietnamese had struggled against foreign invasions. The lessons of his ancestors made him feel the need to once again save his country. Whenever he heard the name of his country, he felt a strong surge of hot blood running inside of him. Tuan believed that his time in the United States was temporary, just a short stay until he could return to his real home.

However, once Tuan began living in the United States, things began to change rapidly. The liberal style of living enjoyed by other youngsters diverted him from his old goal. Tuan used the little money he earned from working part-time on a new car and expensive clothing. This was the same money he once promised to himself that he would contribute to the needy boat people, one of whom he once was.

Due to the pressure of his Americanized friends, Tuan began going to nightclubs and bars every night. One night, after he had had a little too much to drink, Tuan fell asleep in the bar. During his sleep, he had a dream in which he saw that he had two possible destinies and that time was running out for him to make a decision.

Tuan woke up. Sweating heavily, he began to decide the path for his life: either

going back to his old dreams and plans or continuing his life as a "bum."

Press N if Tuan turns his life around and returns to the ideas of his youth.

Press S if Tuan sinks further into "life as a bum."

Mystery House Adventures

What a beautiful house! As I stop and face it, its beauty attracts me. All the trees and flowers are trimmed evenly and neatly. The flowers are all in bloom and make the house look wonderful. I peek in the window to see if the inside is as attractive. Not at all.

Oddly, I feel compelled to explore it. The door is not locked. I walk in.

The front room is a mess. A layer of dust covers everything. Spider webs hang everywhere. Magazines are all over the floor; most of them are crumpled and torn. To my surprise, I see, in the middle of all of this, a little girl sitting listlessly on the sofa. She looks at me but doesn't say a word.

What should I do?

Type U if I should ignore the girl and head upstairs.

Type E if I should try to talk to the girl.

Science Fiction / Fantasy Adventure

You are the commander and pilot of a space vessel. You have spent almost six months alone in space, and your only partner is the ship's computer, John. You are a member of a Space Patrol and your duty is to keep the peace and provide rescue services in space. You have to be aware of Space Pirates who are devastating the

solar system. You also provide emergency repair and medical services to ships and passengers.

You see a space vessel coming toward you.

Press E if this vessel is a Space Pirate.

Press W if this vessel is a damaged vessel in need of help.